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Begin

REEL

543

SPE RANSKY, N.

YELIN, A.; SEL'YAKOV, M.; VISKIN, S.; LOYKO, N.; BUKHGALTER, B.;  
VORONKOV, I.; SPERANSKIY, N.

Improvement of planning in the meat industry. Mias. ind.  
SSSR 32 no.4:33-37 '61. (MIRA 14:9)

1. Astrakhanskiy myasokombinat (for Yelin).
  2. Kazgipromyas-  
omolprom (for Selyakov).
  3. Khar'kovskiy myasokombinat (for  
Viskin).
  4. Leninskiy myasokombinat (Kemerovskiy sovnarkhoz)  
(for Bukhgalter).
  5. Novgorodskiy myasokombinat (for Voronkov).
  6. Buryatskiy sovnarkhoz (for Speranskiy).
- (Meat industry)

PETRUSHOV, V.A., kand. tekhn. nauk; SPERANSKIY, N.G., inzh.;  
VASIL'YEVA, I.V., red. izd-va; ~~EL'KIND, V.D.~~, tekhn. red.

[Testing methods for calculating and multiple-disk transformers  
with internal contacts]. Ispytaniia i metoda rascheta  
mnogodiskovykh friktsionnykh transformatorov s vnutrennim  
kontaktom. Moskva, ~~Mashiz~~, 1963. 93 p. (Moscow, Gosudarst-  
vennyi nauchno-issledovatel'skii avtomobil'nyi i avtomotornyi  
institut. Trudy, no.52). (MIRA 16:6)

(Automobiles—Transmission devices)

SPERANSKY, N. I.

"Au sujet de l'etiologie du rhumatisme." Speransky, N. et Novoselsky, V. (p. 592)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1940, Volume 18, No. 1.

SPERANSKIY, N. I.

"Clinical Diagnosis of Myocardial Infarctus Unaccompanied by Pain," Klin. Med., 27, No. 3, 1949, Mbr., Hosp. Therapeutic Clinic, 1st Moscow Order Lenin Med. Inst., -cl949-.

SPERANSKIY, N.I.;BELOUS, S.R.

Regional leukocytosis in inflammatory and necrotic diseases of the heart. Ter. arkh., Moskva 25 no.4:76-83 July-Aug 1953. (GLML 25:4)

1. Docent for Speranskiy; Laboratory Physician for Belous. 2. Of the Hospital Therapeutic Clinic (Director -- Prof. A. I. Myasnikov, Active Member AMS USSR) of First Moscow Order of Lenin Medical Institute.

SPERANSKIY, N.I.

~~Treatment of non-specific infectious polyarthrit~~  
Treatment of non-specific infectious polyarthrit<sup>is</sup> with short wave  
diathermy; result of controlled action on the adrenal cortex. Vop.  
kur.fizioter.i lech.fiz.kul't. no.1:50-54 Ja-Mr '55. (MLRA 8:8)

1. Opyt napravlenno<sup>go</sup> vo<sup>z</sup>deystviya na funktsiyu kory nadpochechnikov.  
(DIATHERMY, in various diseases,  
short wave, in rheum. arthritis)  
(ARTHRITIS, RHEUMATOID, therapy,  
diathermy, short wave)



*SPERANSKIY, N.I.*

SPERANSKIY, N.I., doktor meditsinskikh nauk; OSTROVSKAYA, V.I.

Role of neural factors in stenocardia. Sov.med. 19 no.1:41-45 Ja '55.  
(MIRA 8:4)

1. Iz gosital'noy terapevticheskoy kliniki (dir. deystvitel'nyy  
chlen Akademii meditsinskikh nauk SSSR prof. A.L.Masinkov) i Moskov-  
skogo ordena Lenina Meditsinskogo instituta.

(ANGINA PECTORIS, physiology,  
reflex mechanism)

SPERANSKIY, N.I.

Resort therapy in cardiovascular diseases. Vop.kur. fizioter.  
i lech. fiz.kul't. 23 no.6 :481-485 N-D '58 (MIRA 11:12)

1. Zaveduyushchiy terapevticheskoy klinicheskoy Tsentral'nogo  
instituta kurortologii.  
(CARDIOVASCULAR SYSTEM—DISEASES)

SPERANSKIY, N. I.; GLAGOLEVA, N. A.; ZOTOVA, A. T.; LEONOVA, V. M.;  
ROZENBLIT, Ye. I.; STUDNITSYNA, L. A. (Moskva)

Treatment of stenocardia with novocaine electrophoresis in  
Zakharin-Head' zones. Klin. med. no.9:103-106 '61.  
(MIRA 15:6)

1. Iz terapevticheskoy kliniki (zav. - prof. N. I. Speranskiy)  
TSentral'nogo instituta kurortologii i fizioterapii (dir. G. N.  
Pospelova)

(ANGINA PECTORIS) (NOVOCAINE)

SPERANSKIY, N.I., prof.; DANENKOV, Ya.I., kand.med.nauk; CHERNYKH, G.A.  
(Moskva)

Postoperative indications and sanatorium and spa therapy of  
patients following mitral commissurotomy. Klin.med. 39 no.5:  
88-95 My '61. (MIRA 14:5)

1. Iz terapevticheskoy kliniki (zav. - prof. N.I. Speranskiy)  
TSentral'nogo instituta kurortologii i fizioterapii Ministerstva  
zdravookhraneniya SSSR (dir. - kand.med.nauk G.N. Pospelova).  
(MITRAL VALVE--SURGERY)

SPERANSKIY, N.I.; DANENKOV, Ya.I.

Should one direct patients with cardiovascular diseases to southern seaside resorts during the hot summer months. Vop.kur., fizioter.i lech. fiz. kul't. 27 no.2:97-102 Mr-Ap '62.

(MIRA 15:11)

1. Iz terapevticheskoy kliniki (zav. - prof. N.I.Speranskiy)  
TSentral'nogo instituta kurortologii i fizioterapii (dir. G.N. Pospelova).

(CARDIOVASCULAR SYSTEM—DISEASES)(SEASIDE RESORTS)

SPERANSKIY, N.I., prof.; CHERNYKH, G.A.

Sanatorium and health resort treatment of patients with a  
persistent form of hypertension. Vop kur., fizioter. i lech.  
fiz. kul't. 27 no.4:307-311 J1-Ag'62 (MIRA 16:11)

1. Iz kardiologicheskogo otdeleniya (zav. prof. N.I.Speranskiy)  
TSentral'nogo instituta kurortologii i fizioterapii (direktor  
G.N.Pospelova).

\*

AKULOVA, R.F.; BYKHOVSKIY, Z.Ye.[deceased]; VYGODNER, Ye.B.;  
GOL'DFAYL', L.G.; DIK, V.G.; DMITRIYEVA, N.M.; DUBYNINA,  
Ye.I.; LEVIN, B.S.; NEZLIN, S.Ye.; SPERANSKIY, N.I.;  
SOROKINA, Ye.I.; TKACHENKO, A.F.; FREYDIN, Kh.M.;  
CHETVERIKOV, N.S.; VOL'FSON, I.Z., red.; KOKIN, N.M., tekhn.  
red.; FRONINA, N.D., tekhn. red.

[Manual for physicians on the selection of sanatoriums and  
health resorts] Rukovodstvo dlia vrachei po sanatorno-  
kurortnomu otboru. Pri uchastii R.F.Akulovoi i dr. 2 izd.,  
dop. i ispr. Moskva, Medgiz, 1963. 511 p.

(MIRA 16:12)

(SANATORIUMS)

(HEALTH RESORTS, WATERING PLACES, ETC.)

SPERANSKIY, N.I.; GLAGOLEVA, N.A.; ZOTOVA, A.T.; LEONOVA, V.M.; ROZENBLIT,  
Ye.I.; STUDNITSYNA, L.A.

Result of using aeroion therapy in hypertensor and stenocardia.  
Vop.kur., fizioter. i lech. fiz. kul't. 28 no.2:130-135 Mr-Apr'63.  
(MIRA 16:9)

1. Iz terapevticheskogo otdeleniya (zav. - prof. N.I. Speranskiy)  
kliniki Tsentral'nogo instituta kurortologii i fizioterapii  
(dir. - kand. med.nauk G.N.Pospelova)  
(HYPERTENSION) (AIR, IONIZED—THERAPEUTIC USE)  
(ANGINA PECTORIS)



SPERANSKIY, N.I., prof.

Sanatorium and health resort treatment of stenocardia.

Vop. kur. fizioter. i lech. fiz. kul't. 28 no.3:193-198

My-Je '63. (MIRA 17:5)

1. Iz terapevticheskogo otdeleniya (zav.-prof. N.I. Speranskiy)  
TSentral'nogo instituta kurortologii i fizioterapii (dir.-  
land. med. nauk. G.N. Pospelova).

SPERANSKIY, N.I., prof.; SOROKINA, Ye.I.

Hexamethonium of sympathetic ganglionitis with cardiac pain syndrome. Ter. arkh. 35 no.4:13-19 Ap'63 (MIRA 17:1)

1. Iz terapevticheskogo otdeleniya (zav. - prof. N.I.Speranskiy)  
TSentral'nogo instituta kurortologii i fizioterapii.

SPERANSKIY, N.I.prof.; SOROKINA, Ye.I. (Moskva)

Coronary pain syndrome in sympathicoganglionitis. Klin. med. 41  
no.7:13-18 JI'63 (MIRA 16:12)

1. Iz terapevticheskogo otdeleniya (zac. - prof. N.I.Speranskiy)  
TSentral'nogo instituta kurortologii i fizioterapii (dir. G.N.  
Pospelova).

SPEKANSKIY, N.I., prof.; SOROKINA, Ye.I.

Expediency of balneological treatment of stenocardia in patients  
with atherosclerosis. Vop. kur. fizioter. i lech. fiz. kul't. 28  
no.3:199-204 My-Je '64. (MIRA 17:5)

1. Iz terapevticheskogo otdeleniya (zav.-prof. N.I. Speranskiy)  
TSentral'nogo instituta kurortologii i fizioterapii (dir. - kand.  
med. nauk G.N. Pospelova).

SPERANSKIY, N.I.; SOROKINA, Ye.I.; BELAYA, N.A.

Use of massage in cervical-thoracic radiculitis and sympathico-ganglionitis with cardialgia syndrome. Zhur. nevr. i psikh. 65 no.2:222-227 '65. (MIRA 18:9)

1. Tsentral'nyy institut kurortologii i fizioterapii (direktor - dotsent G.N. Pospelova), Moskva.

S/170/62/000/006/005/011  
B117/B138

AUTHORS: Mikryukov, V. Ye. (Deceased), Speranskiy, N. M.  
TITLE: Heat conductivity and specific electrical resistivity of  
nickel-zinc ferrites

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, no. 6, 1962, 38 - 42

TEXT: Ni-Zn ferrites used in radio and electronic circuits have working temperatures of 100 - 250°C. Heat conductivity, electrical resistivity, and Curie points of seven Ni-Zn ferrite samples were studied between 50 and 350°C. The heat conductivity was measured with high accuracy (maximum error 1 %) by the absolute method of the plane layer with an apparatus designed by Engineer G. I. Shelkovnikov. The Curie points were found with apparatus of V. I. Chechernikov (V. I. Chechernikov and Yu. D. Volkov Vestnik Moskovskogo universiteta, seriya fiziko-matem., no. 2, 1959) which is based on the principle of fixing the paramagnetic susceptibility of substances by the Faraday-Sucksmith method. The Curie points determined lay between 270 and 290°C. From a certain relationship between heat conductivity and Curie points it was assumed that the heat conductivity can

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B117/B138

Heat conductivity and specific ...

be used as a reliable parameter for determining Curie points of ferrites. To establish possible structural changes under heat absorption and emission, the samples were tested by a Kurnakov apparatus. No endo- or exothermic processes were observed. The heat conductivity of Ni-Zn ferrites depends essentially on the heat conductivity of the lattice. It is inversely proportional to the zinc oxide content. This may be due to: (1) structural distortions caused by zinc atoms, favoring the scattering of phonon waves and thus reducing the heat conductivity; (2) the size of grains in the sample, though this effect is smaller than that of distortions. The heat conductivity of Ni-Zn ferrites increases with increasing temperature. Such a temperature dependence may be due to the thermal capacity and the mean free path of phonons. This should be clarified by studying the thermal capacity of Ni-Zn ferrites. The electrical resistivity was found to increase with increasing content of nickel ions in the sample, and decrease with increasing temperature. There are 3 figures and 2 tables.

ASSOCIATION: Gosudarstvennyy universitet im. M. V. Lomonosova, G. Moskva  
(State University imeni M. V. Lomonosov, Moscow)

Part 2/3

Heat conductivity and specific ...

S/170/62/000/006/005/011  
B117/B138

SUBMITTED: November 9, 1961

Card 3/3



L 9878-66 EWT(1)

ACC NR: AP5025159

SOURCE CODE: UR/0188/65/000/005/0045/0048

AUTHOR: Chechernikov, V. I.; Speranskiy, N. M.; Malyshev, N. I.

44, 55

44, 55

44, 55

76  
73

B

TITLE: Electrical, thermal, and some magnetic properties of nickel-cadmium ferrites 21, 44, 55

SOURCE: Moscow. Universitet. Vestnik. Seriya III. Fizika, astronomiya, no. 5, 1965, 45-48 44, 55

TOPIC TAGS: ferrite, nickel compound, cadmium compound, electric resistance, heat conductivity, hardness, magnetic susceptibility, crystal lattice

ABSTRACT: A study was made of the electric resistivity ( $\rho$ ), heat conductivity coefficient ( $\lambda$ ), magnetic susceptibility, microstructure, and microhardness of nickel-cadmium ferrites containing variable amounts of  $\text{Fe}_2\text{O}_3$  (55.1-68.6),  $\text{NiO}$  (3.9-39.4), and  $\text{CdO}$  (2.9-40.7%). The electric resistivity was measured by the 2-probe method in the temperature range of 20-900C, i.e. in the ferro- and paramagnetic regions. The rectilinear curves of  $\log \rho = f(1/T)$  in all samples

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UDC: 621.318.13:53

L 9878-66

ACC NR: AP5025159

had inflections, before and after which the known law  $\rho = A e^{(F/kT)}$  was applicable. The electric resistivity ( $\rho$ ) and the energy of activation (A), according to the value of the curve inclinations, decreased with increased amounts of cadmium in the nickel-cadmium ferrites. It was possible that the increased amount of cadmium ions changed the lattice constant and the distribution of ions in the sublattice. The effect of temperature on heat conductivity ( $\lambda$ ) was studied in the temperature range of 20-500C by the V. E. Mikryukov and N. M. Speranskii method (Inzhenerno-fizicheskii zhurnal VI, 1962). The  $\lambda$  in each sample was constant. This indicated that the law  $\lambda \propto T$  const., which was supposedly characteristic of bodies having a thermal lattice conductivity, was not applicable to the nickel-cadmium ferrites. The thermal conductivity of nickel-cadmium ferrites was basically affected by the lattice vibrations. The value of  $\lambda$  decreased with increased amounts of cadmium ferrites. This was evidently caused by structure distortions in the lattice affected by the addition of cadmium ions having an atom radius much larger than nickel and iron. A study of the microstructure of samples suggested that the thermal conductivity of nickel-cadmium ferrites decreased with increased average grain size. Magnetic susceptibility at 100-200C, i.e. in the region of the Curie point, changed little and monotonically. Then it decreased rapidly with decreased temperature

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ACC NR: AP5025159

and at  $T > \theta_f$  followed the Neel law. The magnetic susceptibility near the Curie ferromagnetic point ( $T \approx \theta_f$ ) was a function of the magnetic field intensity. The study showed that both the electric and the heat conductivity in nickel-cobalt ferrites behaved in the same manner. The electric conductivity was caused mainly by electron transitions between the iron ions, whereas thermal conductivity was controlled by lattice vibrations. The authors thank Professor E. I. Kondorskii for his advice. Orig. art. has; 2 figures and 1 table.

SUB CODE: MM,IC/ SUBM DATE: 12May64/

NR REF SOV: 002/ OTHER: 000

*Beh*  
Card 3/3

1 6975-66 EWP(z)/EWT(m)/EWP(b)/EWP(t) IJP(o) JD/HM/JG/MJW(ol)

ACC NR: AP5018871

SOURCE CODE: UR/0126/65/020/001/0157/0159

AUTHOR: Chechernikov, V. I.; Speranskiy, N. M.; Terekhova, V. F.; Rozhkova, R. S.

ORG: Moscow State University im. M. V. Lomonosova (Moskovskiy gosuniversitet)

TITLE: Several magnetic properties of Ni-Eu alloys

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 1, 1965, 157-159

TOPIC TAGS: Europium compound, nickel containing alloy, magnetic property, paramagnetic susceptibility

ABSTRACT: Temperature dependence (300-1000°C) of paramagnetic susceptibility using the Faraday method at  $10^{-3}$  to  $10^{-4}$  mm Hg was studied for specimens containing 0.77, 2.0, 3.26, 3.6 and 6.38% Eu. Samples of electrolytic Ni of 99.9% purity and Eu not containing more than .2% total impurities were cast and remelted under 15 atm of helium 3-4 times in a tungsten-arc furnace and then homogenized for 100 hrs at 1100°C. Microstructural examination showed the presence of a eutectic Ni(α) + Ni<sub>17</sub>Eu<sub>2</sub>, which increased with increasing Eu. The eutectic transformation temperature was  $1190 \pm 10^\circ\text{C}$ . The solubility of Eu in Ni does not exceed 0.77% at.% Eu.

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UDC: 546.661 : 538.214

L 6975-66

ACC NR: AP5018871

The compound  $\text{Eu}_2\text{Ni}_{17}$  ( $\text{Th}_2\text{Ni}_{17}$  type) was indexed at  $c/a = 0.968$  giving lattice parameters  $a = 8.36 \text{ \AA}$  and  $c = 8.09 \text{ \AA}$  and intensity measurements indicate an hexagonal structure. The hardness of the compound was  $271 \text{ kg/mm}^2$  as compared with  $70 \text{ kg/mm}^2$  for pure Ni. The variation of the reciprocal of the susceptibility  $1/\chi$  with temperature is shown in fig. 1. The Curie-Weiss equation gives the susceptibility where  $\chi_0$  is the temperature insensitive susceptibility. The susceptibility of Ni - 6.38% Eu is almost an order of magnitude greater than for pure nickel. The magnetic moment  $R_p$  is almost independent of the composition - a small increase in  $R_p$  takes place at 6.38% Eu. The paramagnetic Curie point  $\theta_p$  drops initially with increasing Eu and then from 3.0 to 6.38% Eu remains constant. Orig. art. has: 1 figure and 1 formula.

SUB CODE: MM/ SUBM DATE: 24Oct64/ ORIG REF: 000/ OTH REF: 000

Card 2/3

L 6975-66  
ACC NR: AP5018871

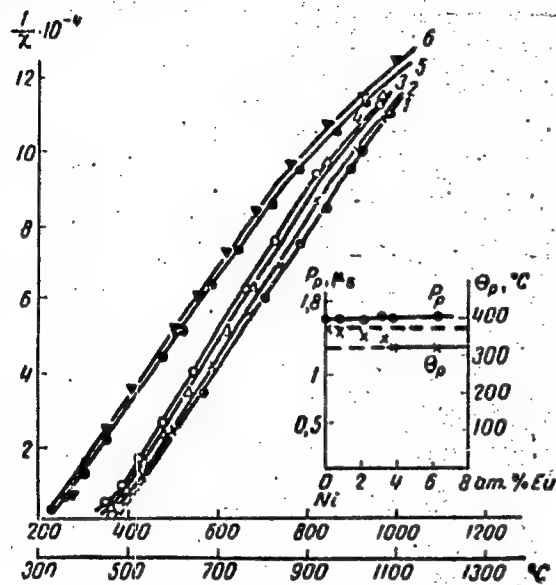


Fig. 1. Dependence of  $1/\chi$  on  $T$  for specimens with varying Eu content. 1 - Ni; 2 - 0.77; 3 - 2.0; 4 - 3.2 at. % - (upper temperature scale); 5 - 3.6; 6 - 6.8 at. % - (lower temperature scale). Lower right shows the dependence of  $R_R$  and  $\theta_R$  on Eu content.

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L 1358-66 EWT(m)/EWP(w)/EWG(m)/T/EWP(t)/EWP(b) IJP(c) RDW/JD

ACCESSION NR: AP5021942

UR/0126/65/020/002/0299/0301

546.657:538.214

AUTHOR: Chechernikov, V.I.; Speranskiy, N.M.; Maslova, E.V.; Terekhova, V.F.TITLE: Magnetic properties of iron-neodymium alloys

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 2, 1965, 299-301

TOPIC TAGS: iron containing alloy, neodymium containing alloy, magnetic properties, constitution diagram, ferromagnetic region, paramagnetic region, Curie point, anti-ferromagnetic interaction, three sublattice structure

ABSTRACT: Pure carbonyl iron (99.9%) and neodymium metal (99.5%) were smelted together in an arc furnace with a nonconsumable tungsten electrode in a purified helium atmosphere under a pressure of 300-400 mm Hg. The resulting alloys containing different proportions of Fe to Nd were remelted several times to assure homogeneity and annealed in evacuated quartz ampoules at 600 and 900°C for 130 hr. Subsequent microstructural and X-ray analyses of the sphere- and rod-shaped specimens showed that most of the obtained alloys are of two-phase kind and represent mechanical mixtures of solid solutions (based on pure components) with chemical compounds ( $\text{Fe}_{17}\text{Nd}_2$  and  $\text{Fe}_2\text{Nd}$ ). Such a type of constitution diagram largely deter-

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ACCESSION NR: AP5021942

mines the magnetic properties of these alloys. The magnetic properties were investigated with the aid of the magnetic scale described by V. I. Chechernikov (Vestnik MGU, ser. fiz., 1957, no 1, 47), at first in the ferromagnetic region. It turned out that in alloys containing from 10.52 to 85 at.% Nd, below the ferromagnetic Curie point  $\theta_f$  there exists a temperature range in which magnetization decreases to a minimum whereupon it again rises, and then again drops to zero at  $T = \theta_f$ . The investigations were also carried out in the paramagnetic region, where they made it possible to calculate the effective magnetic moment  $P$  and the temperature of the paramagnetic Curie point. The temperature range of investigations in both the ferromagnetic and the paramagnetic regions was 300-1300°K. It is concluded from the findings that in the Fe-Nd alloy system there exists, along with the ferromagnetic, also an antiferromagnetic interaction which is most clearly manifested in the case of the one-phase compound  $Fe_{17}Nd_2$ . As the experiments revealed, in the region of existence of this compound the magnetic moment of alloy reaches a minimum and the paramagnetic Curie point is much lower than in pure iron. It is possible that a three-sublattice structure exists in the Fe-Nd system, with positive interaction existing between homogeneous atoms and negative interaction between the atoms of Fe and Nd. The magnetization of Fe-Nd alloys throughout the temperature range investigated is conditioned by the Fe atoms; it is not completely compensated, since the magnetic moment of the Fe atom exceeds that of the Nd atom. "In conclusion the

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L 1358-66

ACCESSION NR: AP5021942

authors wish to express their gratitude to Professor Ye. I. Kondorskiy for discussion of the findings and constructive advice." Orig. art. has: 3 figures, 1 table. 5

ASSOCIATION: Moskovskiy gosuniversitet im. M. V. Lomonosova (Moscow State University) 55

SUBMITTED: 21Jul64

ENCL: 00

SUB CODE: IM, MM

NO REF SOV: 002

OTHER: 001

Pure metal

Card 3/3

CHECHERNIKOV, V.I.; SPERANSKIY, N.M.; MALYSHEV, N.I.

Electric, thermal and some magnetic properties of nickel-cadmium ferrites. Vest. Mosk. un. Ser. 3: Fiz., astron. 20 no.5:45-48 S-0 '65. (MIRA 18:11)

1. Kafedra magnetizma Moskovskogo universiteta. Submitted May 12, 1964.

ACC NR: AT6028976 SOURCE CODE: UR/0000/66/000/000/0071/0075

AUTHORS: Chochornikov, V. I.; Sporanskiy, N. M.; Malyshev, N. I.

ORG: none

TITLE: Magnetic, thermal, and electrical properties of nickel-cadmium ferrites

SOURCE: Vsesoyuznoye soveshchaniye po ferritam. 4th, Minsk. Fizicheskiye i fizikokhimicheskiye svoystva ferritov (Physical and physicochemical properties of ferrites); doklady soveshchaniya. Minsk, Nauka i tekhnika, 1966, 71-75

TOPIC TAGS: ferrite, electric resistance, magnetic susceptibility, heat conductivity, nickel compound, cadmium compound

ABSTRACT: Specific electrical resistance, heat conductivity, and magnetic susceptibility of nickel-cadmium ferrites have been studied as functions of temperature within a temperature range up to 500C. The chemical composition of the specimens is listed in Table 1

Specimen	Chemical analysis, wt. %		
	Fe <sub>2</sub> O <sub>3</sub>	NiO	CdO
1	65.2	24.4	10.4
2	63.9	20.8	15.3
3	61.8	17.5	20.7
4	61.4	14.3	24.3
5	57.6	5.4	37.0
6	55.4	0	44.6

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ACC NR: AT6028976

At these conditions it is possible to observe the variations of physical properties in ferrites changing from a normal spinel structure to mixed and reversed structure. The effect of temperature upon the heat conductivity  $\lambda$  and upon specific electrical conductivity  $\rho$  of various compositions of this ferrite system is illustrated in Figs. 1 and 2. A definite correlation was established between the

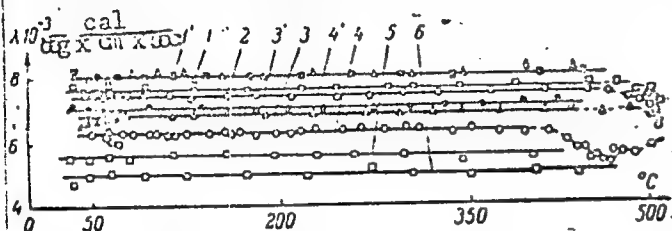


Fig. 1. Coefficient of thermal conductivity for Ni-Cd ferrites as a function of temperature (see Table for composition)

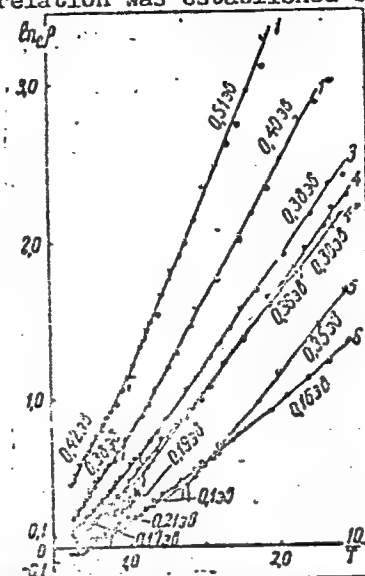


Fig. 2.  $\ln \rho$  for Ni-Cd ferrites as a function of  $1/T$  (see Table for composition)

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ACC NR: AT6020976

investigated properties, especially a regularity between the temperature and composition of the ferrite, on one hand, and the specific electrical resistivity and heat conductivity, on the other. The obtained data indicate that the decisive role in determining these properties is played by the electrons located in apices of the crystal lattice. Orig. art. has: 1 table and 4 figures.

SUB CODE: 11, 20/      SUM DATE: 22Dec65/      ORIG REF: 003

Card 3/3 *98*

SPERANSKIY, Nikolay Nikolayevich; KHARCHENKO, Grigoriy Stepanovich; OGIYENKO,  
S.I., red.; RADNAYEV, A.N., tekhn. red.

[First place in the meat industry of the East] Pervenets miasnoi  
industrii Vostoka. Ulan-Ude, Buriatskoe knizhnoe izd-vo, 1960. 86 p.  
(MIRA 14:11)

(Buryat-Mongolia—Meat industry)

SPYKINS, H. S.

KOTON, H. L. and SPYKINS, H. S. "For more aggressive infiltration of progressive techniques into city management", Materialy po kommunal. khoz-yu, 1947, Collection 2, p. 3-10.

SPERANSKIY, V. (Obninsk)

Transistorized video receiver. Radio no.7-49-51 J1 '63.  
(MIRA 16:7)

(Radio—Receivers and reception)



VARLAMOV, R.; inzh.; SPERANSKIY, V.

Transistorized audio tracking device. Radio no.11:25-27 N '63.  
(MIRA 16:12)

CHERKUDKINOV, S. A., SPERANSKIY, N. V.

Mechanical Engineering

Synthesis of flat, hinged mechanisms with stops.  
Trudy Sem.teor.mash. 11, No. 43, 1951.

9. Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED.

1. 1958, 1959.

2. 1958, 1959.

Designing helical cross mechanisms with jointed four-link drive. Trudy kon. Teor. Mash  
17, No. 45, 1971.

9. Monthly List of Russian Accessions, Library of Congress, June 1958<sub>2</sub>, Uncl.

CHERKUDINOV, S.A.; SPERANSKIY, N.V.

Suggested type for maltese cross gear. Trudy Sem.po teor.mash.  
15 no.60:28-44 '56. (MLRA 9:11)

(Gearing)

SPERANSKIY, N.V.

Maltese mechanisms with elliptical gear drives. Trudy Inst.mash.  
Sem. po teor. mash. 17 no.67:22-29 '57. (MIRA 11:2)  
(Mechanical movements)

*SPERANSKIY, N.V.*  
CHERKUDINOV, S.A.; SPERANSKIY, N.V.

Using the method of multiple interpolative approximation for  
the synthesis of four-link transmission mechanism. Trudy Inst.  
mash.Sem. po teor. mash. 17 no.67:46-77 '57. (MIRA 11:2)  
(Mechanical movements)

CHERKUDINOV, S.A.; SPERANSKIY, N.V.

Using the method of interpolative approximation with a single  
high-multiplicity unit for the synthesis of four-link trans-  
mission mechanisms. Part 2. Trudy Inst.mash.; Sem.po teor.  
mash. 18 no.71:60-68 '58. (MIRA 12:1)  
(Mechanical movements)

PHASE I BOOK EXPLOITATION SOV/4622

Speranskiy, Nikolay Vasil'yevich

Proyektirovaniye mal'tiyskikh mekhanizmov (Designing Geneva Mechanisms) Moscow, Izd-vo AN SSSR, 1960. 94 p. (Series: Problemy teorii mashin) Errata slip inserted. 4,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya.

Editorial Board: I. I. Artobolevskiy (Resp. Ed.) Academician, V. I. Dikushin, Academician, S. V. Serensen, Academician, Academy of Sciences Ukrainskaya SSR, S. V. Pinegin, Doctor of Technical Sciences, Professor, A. I. Levitskiy, Doctor of Technical Sciences, Professor, F. M. Dimentberg, Doctor of Technical Sciences, A. Ye. Kobrinskiy, Doctor of Technical Sciences, N. P. Rayevskiy, Candidate of Technical Sciences, and A. P. Bessonov, Candidate of Technical Sciences (Scientific Secretary); Resp. Ed.: I. I. Artobolevskiy, Academician; Ed. of Publishing House: V. A. Sokolova-Chestnova; Tech. Ed.: L. A. Sushkova.

Card ~~1/4~~



LITVIN, Faydor L'vovich; GRUBIN, A.N., prof., doktor tekhn.nauk,  
retsensent; SPEIRANSKIY, N.V., red.; KRYUCHKOVA, V.N., tekhn.red.

[Theory of gears] Teoriia zubchatykh zatsepleni. Moskva,  
Gos.izd-vo fiziko-matem.lit-ry, 1960. 444 p. (MIRA 14:3)

(Gearing)

CHERKUDINOV, S.A.; SPIRANSKIY, N.V.

Design of a balancing spring mechanism. Trudy Inst.mash. Sem. po teor.  
mash. 21 no.81/82:4-11 '60. (MIRA 13:11)  
(Balancing of machinery)

GERONIMUS, Yakov Lazarevich; SPERANSKIY, N.V., red.; MURASHOVA, N.Ya.,  
tekhn. red.

[Geometrical apparatus of the theory of synthesis of plane  
mechanisms] Geometricheski apparat teorii sinteza ploskikh me-  
khanizmov. Moskva, Fizmatgiz, 1962. 399 p. (MIRA 15:11)  
(Geometry, Modern) (Mechanics, Analytic)

AUTHOR: Speranskiy, R.V., Engineer SOV-91-58-9-6/29

TITLE: Remodelling the Discharge Device in Feed Pumps (Rekonstruktsiya razgruzochnogo ustroystva pitatel'nykh nasosov)

PERIODICAL: Energetik, 1958, Nr 9, p 16 (USSR)

ABSTRACT: To prevent water boiling in the feed pump when the load is small, the pump is fitted with a discharge line connecting its pressure outlet with an equalizing chamber or deaerator. In the 5Ts-10 pumps, the internal bush of the discharge device has a small area of contact with the upper and lower flanges. The valve needle also "rubs" on the bush. Serious metal erosion takes place around the bush. A remodelled discharge device is shown which has largely solved this defect. The bush has a wider area of contact with the flanges and paranite linings have been fitted to both upper and lower flange surfaces instead of to just one. The remodelled device has proved superior to the old one in practice. There are 2 diagrams.

1. Feed pumps--Design 2. Feed pumps--Operation 3. Water pump rotors--Design

Card 1/1

SPERANSKIY, S.; TSYBUL'KO, I.

Safety measures in lumbering. Sots. trud 5 no.11:139-140 N '60.  
(MIRA 14:1)  
(Archangel Province--Lumbering--Safety measures)

SPERANSKY S.I.

*Med*  
The blood-sugar curves after peroral and subcutaneous administration of glucose. S. I. Speransky. *Klin. Med.* (U. S. S. R.) 16, 1662-6 (1938); *Chem. Zentr.* 1932, II, 447.—In contrast to peroral administration, subcutaneous administration of glucose in amts. of 500 cc. of an isotonic soln. produced no hyperglycemia. This was probably the result of a stimulation of the insulin-forming app. whereby the assimilation process was dependent upon a cellular tissue factor. M. G. Moore

Shchegolev, A. A.,

Data on the Problem of Climatophysiology. Voenno-meditsinsky Zhurnal,  
No 1, p 54. 1955

PATIS, M.M.; SPERANSKIY, S.P., prof.

Conference of students of the Archangel Medical Institute, December  
27-28, 1957. Zdrav.Ros.Feder. 2 no.5:44 My '58. (MIRA 11:5)  
(ARCHANGEL--MEDICINE--STUDY AND TEACHING)



AUTHOR: Speranskiy, S.F., Professor 3-58-6-16/34

TITLE: Film Lectures at a Medical Institute (Kinolektsii v meditsinskom institute)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, Nr 6, p 69-70 (USSR)

ABSTRACT: Starting with the 1956/57 school year, several chairs of the Arkhangel'sk Medical Institute began to make use of scientific instructional and documentary motion pictures at their lectures. The author describes the various ways in which the films are being presented.

ASSOCIATION: Arkhangel'skiy meditsinskiy institut (Arkhangel'sk Medical Institute)

Card 1/1

SPERANSKIY, S.P., prof.

Role of motion pictures in the personnel development of medical students  
and in disseminating medical information to the public. Zdrav.Ros.  
Fed. 2 no.9:9-14 S'58 (MIRA 11:10)

1. Iz Arkhangel'skogo meditsinskogo instituta (dir. A.A. Kirov)  
(MOTION PICTURES IN MEDICINE)

SPIRANSKIY, S.P., prof.

Research work of students at the Archangel Medical Institute. Zdrav.  
Ros. Feder. 3 no.4:31-32 Ap '59. (MIRA 12:4)

1. Iz Arkhangel'skogo meditsinskogo instituta (dir. - dots. A. A.  
Kirov)

(ARCHANGEL--MEDICAL RESEARCH)

KIFOV, A.A., dots.; SPERANSKIY, S.P., prof.

Participation of the Archangel Medical Institute in the work of the  
public health organs. Zdrav.Ros.Feder. 3 no.7:37-40 JI '59.  
(MIRA 13:1)

1. Iz Arkhangel'skogo meditsinskogo instituta (dir. A.A. Kirov)  
(ARCHANGEL PROVINCE--PUBLIC HEALTH)

KOROLENKO, TS. P., assistant; SPERANSKIY, S. V., mladshiy nauchnyy  
sotrudnik

Electroencephalographic changes in acrichine "psychosis" in  
animals. Trudy Novosib. gos. med. inst. 37:118-124 '61.  
(MIRA 15:6)

1. Novosibirskiy nauchno-issledovatel'skiy sanitarnyy institut  
(direktor - starshiy nauchnyy sotrudnik Ye. M. Gorbachev)  
(for Speranskiy).

(ELECTROENCEPHALOGRAPHY)  
(QUINACRINE—TOXICOLOGY)  
(PSYCHOSES)

ABRAMOVA, Zh.I., kand. med. nauk; GADASKINA, I.D., prof.; GOLUBEV, A.A., kand. med. nauk; DANISHEVSKIY, S.L., prof.; ZIL'BER, Yu.D., kand. med. nauk; LAZAREV, L.N., kand. khim. nauk; LEVINA, E.N., doktor med. nauk; LOYT, A.O.; LYUBLINA, Ye.I., doktor biol. nauk; LYKHINA, Ye.T., kand. biol. nauk; MINKINA, N.A., kand. med. nauk; RUSIN, V.Ya., kand. med. nauk; SALYAMON, L.S., kand. med. nauk; SPERANSKIY, S.V., TRAKHTENBERG, I.M., dots.; FILOV, V.A., kand. biol. nauk; TSIRK, K.G., kand. med. nauk; CHEKUNOVA, M.P., kand. med. nauk; GRIVA, Z.I., red.; LAZAREV, N.V., zasl.deyat.nauki, prof., red.; LEVIN, S.S., tekhn. red.; BASINA, M.Z., tekhn. red.

[Toxic industrial substances; handbook for chemists, engineers and physicians] Vrednye veshchestva v promyshlennosti; spravochnik dlia khimikov, inzhenerov i vrachei. Izd.4., perer.i dop. Leningrad, Goskhimizdat. Pt.2.[Inorganic and metallo-organic compounds] Neorganicheskie i elementorganicheskie soedineniia. 1963. 619 p. (MIRA 17:2)

SPERANSKIY, S.V.

Advantages of the use of an increasing current in studying the ability of white mice to summate subthreshold impulses. Farm. i toks. 28 no.1:123-124 Ja-F '65. (MIRA 18:12)

1. Toksikologicheskaya laboratoriya (zav. - prof. I.D.Gadaskina) Leningradskogo nauchno-issledovatel'skogo instituta gigiyeny truda i professional'nykh zabolevaniy. Submitted May 5, 1964.

PA 65/49T95

SPERANSKIY, V. A.

Ussr/Medicine - Penicillin Therapy      Jan/Feb 49  
Gonorrhea Therapy

"Penicillin Therapy of Sulfamide-Resistant Forms of Gonorrhea," Docent V. A. Speranskiy, Ukrainian Sci Res Inst of Skin and Venereal Diseases, 2 pp

"Test Venereol 1 Dermatol" No 1

Penicillin is an excellent agent for treating acute gonorrhea. Author cautions that before administering penicillin in sulfamide-resistant forms of gonorrhea, it is necessary to carry out local and immunotherapy. In cases where the first course of penicillin therapy is ineffective, a

65/49T95

Ussr/Medicine - Penicillin Therapy      Jan/Feb 49  
(Contd)

second and even a third course with increased dosages is recommended.

65/49T95



SPERANSKIY, V.A., kand.tekhn.nauk

Using television apparatus in boiler shops of electric power plants.  
Izv.vys.ucheb.zav.energ. no.8:127-132 Ag '58. (MIRA 11:11)  
(Television) (Boilers)

KHARIN, N.N.; KHARAPINSKIY, Ya.L., prof., red.; SPERANSKIY,  
V.A., red.

[Mathematical logic and the theory of sets; relation  
between the abstract and the concrete] Matematicheskaya  
logika i teoriya mnozhestv; o sootnoshenii abstraktnogo  
i konkretnogo. Moskva, Rosvuzizdat, 1963. 191 p.  
(MIRA 17:6)

SPITSIN, V. G. ed.

Tovarovедение izdelchevykh produktov (uchebnoe posobie dlia tovarovednykh otde-  
lenii i laboratoriy sovetskoi torgovii) / Science of food products; manual  
for corresponding science departments in technical institutions of Soviet  
commerce. Moscow, Gostorgizdat, 1953. 64 p.

DD: Monthly List of Russian Accessions, Vol 7 No 2 May 1954.

USATYUK, M.K., kand.tekhn.nauk; ~~SPERANSKIY, V.G.~~, prof., doktor tekhn.  
nauk, red.; PETROVA, R.G., tekhn.red.

[Potatoes and vegetables, their handling, and principles of their  
processing] Tovarovedenie kartofelia i ovoshchei s osnovami ikh  
pererabotki. Pod red. V.G.Speranskogo. Moskva, Vses.zaachnyi  
koop.tekhnikum TSentrosoiuza, 1956. 221 p.

(MIRA 13:12)

(Potatoes)

(Vegetables)

INIKHOV, Georgiy Sergeyevich, prof.; MAKAR'YEV, Mikhail Anan'yevich;  
SUKHANOVA, Yekaterina Yur'yevna, kand. tekhn. nauk; SPERANSKIY,  
V.G., prof., red.; MAKSIMOVICH, A.G., red.; SUDAK, D.M., tekhn.  
red.

[Food products] Товароведение продовольственных товаров. Под  
red. V.G. Speranskogo. Moskva, Gos. izd-vo torg. lit-ry. Vol.2.  
[Dairy, meat, and fish products] Молочные, мясные и рыбные  
товары. 1958. 314 p. (MIRA 11:10)

(Food)

~~SPERANSKIY, Vasilii Georgiyevich~~, prof., doktor tekhn.nauk; NECHAYEVA,  
Ye.G., red.; EL'KINA, E.M., tekhn.red.

[Biological principles of the keeping quality of fruits and  
vegetables] Biologicheskie osnovy sokhraniyemosti plodov i  
ovoshchei. Moskva, Gos.izd-vo targ.lit-ry, 1961. 126 p.  
(MIRA 14:6)

(Fruit—Storage)

(Vegetables—Storage)

ACCESSION NR: AP5019508

UR/0330/65/000/007/0023/0025

664.8/.9.634.511.631.551.004:4

AUTHOR: Speranskiy, V. G. (Doctor of technical sciences, Professor);  
Strakhova, S.A. (Aspirant)

TITLE: Changes in the composition of the walnut during maturing, ripening, and storage

SOURCE: Konservnaya i ovoshchesushil'naya promyshlennost', no. 7, 1965, 23-25

TOPIC TAGS: walnut, walnut structure, walnut storage, walnut ripening

ABSTRACT: A study was made on walnuts (J. r. var. Ovalis, Obovata, Elongata, and Ovata) grown in the Moldavian SSR in order to determine the optimum time when walnuts should be picked. During ripening, the content of sugars and their relative amounts change; the rapid accumulation of sucrose is probably due to the conversion of starch, whose content decreases. During final ripening, however, the change in sugar is quite different: the content of invert sugar and sucrose decreases, and at the end of the process their amounts are equal, indicating that a vigorous respiration in which sucrose and monose participate takes place during this period; at the same time, the amount of starch also decreases. During storage, the change in sugars is different: invert sugar remains almost unchanged during the initial period of storage, then increases toward the end, whereas the amount of sucrose gradually decreases. Thus, sucrose is chiefly consumed in the respiration during storage, the content of starch decreasing only slightly. During

Card 1/1

ACCESSION NR: AP5019508

maturing, the fat content increases, then decreases during storage, causing a decline in the quality of the walnut. However, an increase in the content of free fatty acids has no adverse effect on the taste. Changes in tannins, organic acids, cellulose, mineral substances, and proteins are briefly described. The studies show that there are varieties of the walnut which are capable of ripening; this is very useful in determining the correct time for harvesting walnuts. Orig. art. has: 2 tables.

ASSOCIATION: Moskovskiy kooperativnyy institut Tsentrosoyuza SSSR (Moscow Cooperative Institute, Tsentrosoyuz, SSSR)

SUBMITTED: 00

ENCL: 000

SUB CODE: GO, LS

NO REF SOV: 000

OTHER: 000

Card 2/2



6

PROCESSES AND PROPERTIES OF STEEL

7

**The Zaporozhstal' Tool-Steel Plant During the Period 1932 to 1937. V. G. Speranskiy. (Kachestvennaya Stal, 1937, No. 11, pp. 59-64. (In Russian). The author gives an illustrated description of the Zaporozhstal' works where tool-steel is produced, giving some statistics regarding production, and discusses the processes used.**

AS 51.4 - METALLURGICAL LITERATURE CLASSIFICATION

U.S. DEPARTMENT OF COMMERCE

STEEL DIVISION

STEEL INFORMATION CENTER

PROCESSES AND PROPERTIES INDEX																									
<p><b>Some Details of the Exploitation of the 30-Ton Electric Furnaces at the Zagorskstal' Works. V. G. Sparanakiy. (Kachestvennaya Stal, 1938, No. 1, pp. 4-7). (In Russian). Brief characteristics of the 30-ton basic-lined 8000 kVA. furnaces are given. These furnaces have now been in operation for 18 months under the following conditions: (1) Using graphite electrodes and a solid charge; (2) using graphite electrodes and a molten charge; (3) using "tamped" electrodes 400 mm. in diameter and solid and molten charges, and (4) using carbon electrodes 600 mm. in diameter and a molten charge. The characteristics of each method of operation are described. The normal diameter of graphite electrodes for these furnaces was 400 mm. The "tamped" electrodes used as substitutes for the graphite electrodes were made by filling a warmed iron pipe, 400 mm. in diameter, with the warmed agglomerate. It was found that no ramming was actually necessary. In view of the comparatively low current density which had to be used with these electrodes, the melting of solid charges took too long, and molten charges obtained from the tilting open-hearth furnaces were therefore substituted. The "tamped" electrodes were found to be very unsatisfactory in other ways. The operation of the furnaces using 600-mm. dia. carbon electrodes and a molten charge was quite good, and it is intended to try the melting of solid charges using these electrodes. In conclusion reference is made to the wear of the refractory lining.</b></p>																									
<p>AS 5 SL 4 METALLURGICAL LITERATURE CLASSIFICATION</p>																									

COMMON ELEMENTS		PROCESSES AND PROPERTIES INDEX		COMMON VARIABLES INDEX	
<p>5</p> <p><i>Continued on other side</i></p>		<p><b>Production of Acid-Resisting Steel YAl Containing Titanium.</b>  V. Speranskiy. (Stal, 1939, No. 4-5, pp. 29-35). (In Russian).  Originally the composition of steel YAl in billets for tube making was: carbon 0-14% max., silicon 1-1% max., manganese 0-2-0-7%, chromium 17-0-20-0%, nickel 8-0-10-0%. The titanium content was calculated by multiplying the carbon content by five and subtracting 0-15. Difficulties experienced in piercing billets led to an investigation of the influence of the various alloying constituents on the plastic properties of the steel. In these investigations, which are discussed, the behavior during piercing was related to the amount of ferrite present. Additions of both aluminium and titanium are undesirable, as they increase the amount of ferrite, and they should therefore be reduced to a minimum. The amount of titanium to be added can be reduced by reducing the carbon content. The chromium: nickel ratio should not exceed 1:9. The optimum composition finally arrived at was: Carbon 0-12% max., silicon 0-3-0-8%, manganese 0-2-0-7%, sulphur 0-03% max., phosphorus 0-03% max., chromium 17-0-19-0%, nickel 9-0-11-5%, and titanium up to 0-6%. The reduction of the chromium and titanium contents did not affect the resistance to intercrystalline corrosion. After referring to earlier methods of melting, the special</p>		<p>COMMON VARIABLES INDEX</p>	
ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION		<p>COMMON VARIABLES INDEX</p>		<p>COMMON VARIABLES INDEX</p>	

electric-furnace method developed at the Kirov works is described in great detail. The charge is melted down with 2% of lime, and one is added to oxidise the carbon, which at the end of the boil should be about 0.03-0.04%. The slag is removed, and ground ferro-silicon and then manganese are added and a silica slag is made up. Ferro-chromium is then added, the slag deoxidised and partially removed, after which ferro-titanium is put in, and finally, after adding ferro-silicon to the slag, the metal is heated up and tapped at 1490-1495° C. In teeming, the viscosity of the alloy must be taken into account. In conclusion, the technique of forging and rolling this type of steel is discussed with reference to temperatures, degree of reduction, &c.

USSR/Engineering  
Metallurgy, Ferrous  
Ball Bearings

Jun 48

"Production of Ball Bearing Steel," S. Z. Yudovich  
and V. G. Speranskiy, Engineers, Kuznets Metallurgical  
Combine, "SpetsStal'" Works, 94 pp

"Stal'" No 6

Describes technological process for manufacture of  
ShKh15 steel and methods for controlling purity of  
steel, particularly exclusion of nonmetallic matter.  
Suggests greater mass production of this type of  
steel without loss of quality due to great demand.

1/49T17

SPERANSKIY, V.G.

Experience in the vacuum processing of metals. Metallurg no.8:  
12-15 Ag '56. (MIRA 9:10)

1. Zamestitel' nachal'nika tekhnicheskogo otdela zavoda "Dnepro-  
spetsstal'".

(Steel--Metallurgy)

SPERANSKIY, V.G.

Performance of electric furnaces of varying capacity. Metallurg  
no.11:20-21 N '56. (MLRA 10:1)

1. Nachal'nik tekhnicheskogo otdela zavoda "Dneprospetsstal'."  
(Electric furnaces)

former steel are given, and properties of the steel are described.  
The book draws on the work practices of the "Dneprospetsstal'"  
Plant (Zaporozh'ye). There are 8 references, all Soviet. No  
personalities are mentioned.

Card 1/2

Producing Transformer Steel in Electric Furnaces

525

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I. Characteristics Required of Transformer Steel	3
II. Technology of Making Transformer Steel in Electric Furnaces	6
Charge materials	7
Oxidizing period of melting	9
Reducing period of melting	15
III. Optimum Technology of Production of Transformer Steel with Vacuum Treatment of the Metal in the Ladle	24
1. Melting the steel	24
2. Teeming and vacuum treatment of steel	28
IV. Properties of Transformer Steel	39

AVAILABLE: Library of Congress (TN 706.B6)

Card 2/2

GO/ad  
8-19-58



SPERANSKIY, Viktor Grigor'evich; BORODULIN, Georgiy Mikhaylovich;  
BOYARSHINOV, V.A., redaktor; ZINGER, S.L., redaktor izdatel'stva;  
EVENSON, I.M., tekhnicheskii redaktor

[Technology of stainless steel production] Tekhnologiya  
proizvodstva nerzhaveliushchei stali. Moskva, Gos. nauchno-tekhn.  
izd-vo lit-ry po cherno i tsvetnoi metallurgii, 1957.  
202 p. (MLRA 10:5)

(Steel, Stainless)

SPERANSKIY, V.G.

TITLE: Book Review - by Speranskiy, V.G.

133-5-9/27

PERIODICAL: "Stal'"(Steel), 1957, No.5, pp. 423-424 (U.S.S.R.)

ABSTRACT: F.P. Yedneral "Electrometallurgy of steel and ferro-alloys, (General Course)." (Elektrometallurgiya stali i ferrosplavov (obshchiy kurs), Metallurgizdat, Moscow, 1955, 510 pages. Except for the pointing out of a few errors or inaccuracies, which can be corrected in the next edition, the reviewer considers that the book is extremely useful.

AVAILABLE:

Card 1/1

AUTHOR: Speranskiy, V.G.

130-10-3/18

TITLE: Perfecting Technology and New Techniques (Sovershenstvovaniye tekhnologii i novaya tekhnika)

PERIODICAL: Metallurg, 1957, no.10, pp. 5 - 8 (USSR).

ABSTRACT: In this article, some of the major technological developments which have taken place recently at the "Dneprospetsstal" Works are described. These include the vacuum-treatment of steel in the ladle and also while being poured from one ladle to another and the use of oxygen in electric furnaces during melt-down and oxidation, the blowing being effected through water-cooled tuyeres (Fig.1). The effects of these techniques on metal quality and yield are discussed. Experience is said to have shown that metal containing tungsten can be oxygen-blown and this and some other features of this technique are considered. Other developments dealt with include modernisation of the furnaces, the use of chromite for fettling, substitution of rolling for hammering, increase in ingot weights, mechanisation of materials and improvements in rolling-mill equipment. There are 3 figures and one table.

ASSOCIATION: "Dneprospetsstal" Works (Zavod "Dneprospetsstal")

AVAILABLE: Library of Congress.  
Card 1/1

*SPERANSKIY, V. G.*

133-10-11/26

AUTHOR: Speranskiy, V. G., Engineer

TITLE: **Technical and Economic** Indices of Electric Smelting of Steel.  
(Tekhniko-Ekonomicheskiye Pokazateli Elektroplavki).

PERIODICAL: Stal', 1957, No.10, pp. 909-912 (USSR).

ABSTRACT: A comparison of furnace operating data for the period 1952-56, illustrating the progress made is given. Changes in the mean duration of heats - Table 1; changes in the mean weight of heats - Table 2; daily steel production (tons) per 1000 kW of the transformer power; stoppages (%) excluding planned repairs - Table 4; changes in the consumption of metallic charge per ton of steel made - Table 5; changes in specific power and electrode consumption - Table 6; changes in the consumption of ingot moulds - Table 7; changes in the durability of magnesite-chrome roofs - Table 8 and changes in the durability of wall lining - Table 9. The proportion of defective metal decreased from 5.9% in 1952 to 2.09% in 1956. There are 9 tables.

ASSOCIATION: Dneprospetsstal' Works. (Zavod Dneprospetsstal').

AVAILABLE: Library of Congress

Card 1/1

SPERANSKIY, V.G., inzhener.

"Electrometallurgy of steel and iron alloys" by P.P. Edneralov. Reviewed by V.G. Speranskii. Stal' 17 no.5:423-424 My '57.

(Steel--Electrometallurgy)

(MIRA 10:6)

(Iron alloys--Electrometallurgy)

(Edneralov, P.P.)

SPERANSKIY, V.G., inzh.

Technical and economic indices of electric smelting [with summary  
in English]. Stal' 17 no.10:909-912 0 '57. (MIRA 10:11)

1. Zavod "Dneprospetsstal'."  
(Steel--Electrometallurgy)

137-58-6-11795

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 85 (USSR)

AUTHOR: Speranskiy, V.G.

TITLE: Technical and Economic Indices Relative to the Making of Structural and Tool Steel with Oxygen (Tekhniko-ekonomicheskkiye pokazateli vyplavki konstruktsionnoy i instrumental'noy stali s primeneniym kisloroda)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii, 1957, Vol 18, pp 549-555

ABSTRACT: The introduction of  $O_2$  into the bath of electric furnaces during the melt-down period is done at the Dneprospetsstal' plant with 12.7-19.05 mm diameter Fe lances and, during the oxidation period, by a water-cooled tuyere in the roof, with delivery at 5-8 atm excess pressure and at a rate of 600-900  $m^3/hr$ . The consumption of  $O_2$  during the melt-down period is 7-10  $m^3/t$ , and the increase in  $[O]$  to 0.031% during this period does not result in contamination of the steel by nonmetallic inclusions. When the flow of  $O_2$  during the period of oxidation is 12-18  $m^3/t$ , the duration thereof diminishes by 12 min on the average, and the electric energy consumption declines by 25

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137-58-6-11795

Technical and Economic (cont.)

kwh. It is indicated that further reduction in the duration of the oxidation period is limited by delays in chemical analysis of the metal and that the [O] in the metal at the end of the period indicated, in heats with and without O<sub>2</sub>, is identical; it amounts to 0.014-0.049%. The use of O<sub>2</sub> improved the utilization of alloy scrap and reduced the consumption of soft Fe in the charge; the result was a diminution of Fe-Cr and Ni consumption and a 20-23% drop in the cost of the steel. It is recommended that in the smelting of fast cutting steel with O<sub>2</sub>, the charge not exceed 0.65% V, and that in smelting transformer steel the ore be oxidized to 0.1% C and further with O<sub>2</sub>, with continuous renewal of the lime slag so as to emerge with <0.008% P, whereas in the smelting of other steels the lime slag be maintained to the end of the melt-down by adding 2.5-3.0% lime with addition of O<sub>2</sub> to speed the melting of the charge; this operation yields 0.015-0.025% P. It is shown that the making of steel by remelting with partial oxidation by O<sub>2</sub> does not impair the quality of the metal and makes it possible to cut the number of categories of steel-alloy waste that have to be maintained at the plant and raise the quantity thereof employed in the charge.

A.Sh.

1. Steel--Production    2. Tool steel--Production    3. Oxygen--Effectiveness  
Card 2/2                      4. Electric furnaces--Operation



PETROV, A.K.; SPERANSKIY, V.G.; KHIZHNICHENKO, A.M.; SHILYAYEV, B.A.;  
DANILOV, A.K.; BORODULIN, G.M.; ZAMOTAYEV, S.P.; MARKARYANTS, A.A.;  
SOLNTSEV, P.I.; SMIRNOV, Yu.D.; VAYNBERG, G.S.; OKOROKOV, N.V.;  
KOLOSOV, M.I.; SEL'KIN, G.S.; MEDOVAR, B.I.; LATASH, Yu.B.;  
YEFROYMOVICH, Yu.Ye.; VINOGRADOV, V.M.; SVED-SHETS, N.N.;  
SKOROKHOD, S.D.; KATSEVICH, L.S.; SHTROMBERG, Ya.A.; MIKHAYLOV,  
O.A.; PATON, B.Ye.

Reports (brief annotations). Biul. TSNIICM no.18/19:67-68 '57.  
(MIRA 11:4)

1. Zavod Dneprospetsstal' (for Speranskiy, Borodulin).
2. Chelyabinskii metallurgicheskii zavod (for Khizhnichenko).
3. Uralmashzavod (for Zamotayev).
4. Trest "Elektropech'" (for Vaynberg).
5. Moskovskii institut stali (for Okorokov).
6. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (for Sel'kin, Sved-Shets).
7. Institut elektrosvarki AN USSR (for Paton, Medovar, Latash).
8. TSentral'naya laboratoriya avtomatiki (for Yefroymovich, Vinogradov).
9. Gissogneupor (for Skorokhod).
10. Trest "Elektropech'" (for Katsevich).
11. Tbilisskii nauchno-issledovatel'skiy institut okhrany truda Vsesoyuznogo tsentral'nogo soveta profsoyuzov (for Shtromberg).

(Steel--Metallurgy)

18(5)

PHASE I BOOK EXPLOITATION

SOV/1528

Speranskiy, Viktor Grigor'yevich, and Gennadiy Vasil'yevich Plenchun

Vakuumnaya obrabotka stali (Vacuum Treatment of Steel) [Moscow]  
Izd-vo VPSPS Profizdat, 1958. 68 p. 3,000 copies printed.

Ed.: V.M. Pankova; Tech. Ed.: N.D. Shadrina.

**PURPOSE:** The purpose of this booklet is to acquaint the general reader with the advanced processes of steel making in a vacuum.

**COVERAGE:** This booklet describes the vacuum treatment of steel. The principles involved and the beneficial effects of the vacuum on molten steel are explained. The most commonly used methods of treating steel in a vacuum are described and illustrated. The text contains schematic diagrams of the commonly used layouts and of the vacuum equipment. No personalities are mentioned. There are 8 Soviet references.

TABLE OF CONTENTS:

The Most Important Task  
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SPERANSKIY, V. G.

Use of Vacuum in Metallurgy (Cont.)

533 Moscow, Izd-vo AN SSSR, 1958, 165pp.  
(ed. SAMARIN, A. M.)

Trans. of a Conf. on Use of Vacuum in Metallurgy, (ed. SAMARIN, A. M.)  
lurgical Plant and at the "Elektrostal'" Plant; Vacuum treatment of alloy  
electric steel in the ladle at the "Dneprospetsstal'" Plant; Teeming of  
high-alloy steel and alloys in a protective atmosphere. There are 3 refer-  
ences, all Soviet.

Speranskiy, V.G. Experience Gained in the Vacuum Treatment of Steel and Teeming  
in a Protective Atmosphere at the "Dneprospetsstal'" Plant 95

Tests conducted at the plant show that vacuum treatment in the ladle makes  
it possible to produce low-carbon and low-sulfur transformer steel and also  
low-hydrogen steel for bearings; that the ingot surface of high-alloy steel  
is improved by teeming in an atmosphere of argon; and that vacuum chambers  
for treatment in the ladle are easy to use. The plant has been making vacuum-  
treated transformer steel on an industrial scale since 1955.

Gostev, K.I. Results of Research on the Use of Vacuum in the Teeming of Alloy  
Steel 103

Card 9/16.

It consists  
pipe system and cooler.

18(5). 25(1)

AUTHOR: Tregubenko, A.F., Engineer, and SOV/125-12-4-9/18  
Speranskiy, V.G.

TITLE: Electric Slag Remelting of Steel in the Factory  
"Dneprospetsstal'", Zaporozh'ye.

PERIODICAL: Avtomaticheskaya svarka, 1959, Vol 12, Nr 4, pp 71-83  
(USSR)

ABSTRACT: The article describes a new furnace, which is working  
since May 1958 in the factory "Dneprospetsstal'",  
The furnace was planned and produced by the Institute  
for Electric Welding (Institut elektrosvarki) /Ref 1,  
2,3/. To introduce the electric slag process, a fus-  
ing agent type AN-25 was used, which is electric con-  
ductive in solid state. For developing the "slag tub"  
in most cases, the fusing agent type NF-6 (system:  
CzF<sub>2</sub> - Al<sub>2</sub>O<sub>3</sub>) was used. 288 ingots of steel were re-  
melted, 181 of them ball bearing steels (ShKh 15 and  
ShKh 15 SG). 19 of the others were EI 654, 16 Kh 2,  
9 - 38 KhMYuA, 10 - IKh18N9T, 19 - ingots of rapid  
steel (R 18 and R18M), the rest - 2Kh13, 18KhNVA,

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SOV/125-12-4-9/18

Electric Slag Remelting of Steel in the Factory "Dneprospetsstal'"

Kh17N2. The "electric slag" remelting decreases soiling by non-metal substances. One gets a much better macro-structure of the metal and in hot state a higher plasticity. In the steel type 1Kh18V9T, the ferrite-component decreases. In rapid steels also the carbide heterogeneity increases. The contents of sulphur is greatly decreased by the process of remelting. There are 9 photographs, 1 diagram, 4 tables and 4 Soviet references.

ASSOCIATION: Elektrometallurgicheskiy zavod "Dneprospetsstal'" im. A.N. Kuz'mina (Electric and Metallurgical Factory "Dneprospetsstal'" imeni A.N. Kuz'min )

SUBMITTED: January 19, 1959

Card 2/2

KALININA, Zoya Mikhaylovna; SPERANSKIY, V.G., retsenzents; VINOGRAD, M.I.,  
red.; SYRCHINA, M.M., red.izd-va; TURKINA, Ye.D., tekhn.red.

[Defects of alloyed steel] Defekty legirovannykh stalei.  
Sverdlovsk, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i  
tsvetnoi metallurgii, Sverdlovskoe otd-nie, 1960. 247 p.  
(MIRA 14:3)

(Steel alloys--Defects)

TREGUBENKO, A.; SPERANSKIY, V. G.

Elektroslag remelting. NT0 2 no.8:10-11 Ag '60. (MIRA 13:10)

1. Direktor zavoda "Dneprospetsstal'" (for Tregubenko). Nachal'-  
nik tekhnicheskogo otdela zavoda "Dneprospetsstal'" (for Speranskiy).  
(Steel--Metallurgy)

S/133/61/000/003/005/014  
AO54/ AO33

AUTHORS: Tregubenko, A. F.; Speranskiy, V. G.; Leybenzen, S. A.

TITLE: Electrosag melting of steel

PERIODICAL: Stal', no. 3, 1961, 233 - 238

TEXT: An electric furnace designed by the institut elektrosvarki im. Ye. O. Patona (Institute of Electric Welding im. Ye. O. Paton) for the re-melting of steel produced in the conventional arc furnace under slag and for the casting of ingots in water-cooled crystallizers has been in operation since May, 1958. The original furnace was re-designed (Figure 1), with an increased capacity, by A. Ya. Kovalenko and consists of two sets of crystallizers, (3 in each set) which operate alternatively: in one set smelting takes place, in the other preparations are made. The furnace operates with 2250 kw, 6 - 7 ka and 50 v. In the crystallizers (formerly made of copper, now of steel) circular (300 mm in diameter) or square ingots (310 x 310 mm) are smelted: the weight of the former is 700 - 950 kg and that of the latter 1100 kg. Cooling water is fed into the crystallizer and bottom plate at 3.5 - 5.0 atm pressure, depending on the water temperature. The bottom of

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S/133/61/000/003/005/014  
AO54/AO33

# Electroslag melting of steel

the crystallizer is made of copper. There is a support to hold the electrode which in this process functions as the charge. In the most recent construction the crystallizer is made of seamless tubes. This solved the welding problems and eliminated the development of a crust during smelting which impurifies the metal. Two kinds of fluxes are used in the electroslag smelting process: 1) a solid flux to conduct the electric current, 2) an working flux for the smelting process, usually of the AHΦ-6 (ANF-6) type containing about 65 % CaF<sub>2</sub>, 30 - 35 % Al<sub>2</sub>O<sub>3</sub>, 3 - 6 % CaO and maximum 1 % (MgO+SiO<sub>2</sub>+FeO). A mixture consisting of the ПAM (PAM) aluminum magnesium powder and the operating flux can also be used as electro-conducting flux. When the furnace is prepared for operation, the inoculator of the crystallizer, made of CF.2 and CF.3 (St.2, St.3) steel discs 295 mm in diameter and 35 mm in height is first fixed to the copper plate, next the inoculator is sprayed with 400 g electro-conducting flux, then the gap between the inner wall of the crystallizer and the electrode is filled with the working flux (23 kg for 700 kg ingots). The transformer is adjusted manually during the first 10 - 15 minutes and, after the stabilization of the process, the furnace is switched over to automatic operation. The smelting process is finished by switching off the mechanism feeding the electrode. After the electric current supply

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S/133/61/000/003/005/014  
A054/A033

# Electroslag melting of steel

is stopped, the ingot is cooled for some time, then it is discharged from the furnace mechanically. In this phase of the process the ingot has a temperature of about 1000°C at the top, while it is cooled to a dark grey colour at its base. In 1959 the electroslag remelting furnace (producing 700 - 720 kg ingots) passed the following operation characteristics: Productivity, (including preparations) 460 kg/h; specific electric power consumption 1250 kwh/t; specific electrode consumption 1.02 t/t; specific ANF-6 flux consumption 35 kg/t; specific cooling-water consumption 240 cum/t (approx.). The effect of electroslag remelting has been investigated for 1X18H9T (1Kh18N9T) stainless steel, 3M654 (EI654) high-alloy austenite steel containing aluminum and titanium, 18XHBA (18KhNVA) and 38XMM2A (38KhMYuA) structural steels, P18 (R18) and P18M (R18M) high-speed steels and X28 (Xh28) and 2X13 (2Kh13) grade steels. For all steels it was found that electroslag smelting improves the quality of the metal considerably. Irrespective of the electrode applied, the metal obtains a dense macrostructure almost free from porosity; non-metallic impurities are decreased and the inclusions occurring are not arranged in aggregations. The mechanical properties of the metal are also improved. Since the inclusions are not aggregated, flakes become

Card 3/6

SPERANSKIY, Viktor Grigor'yevich; POZDNYAKOVA, G.L., red. izd-va;  
ATTOPOVICH, M.K., tekhn. red.

[Aid for the electric steel smelter] V pomoshch' elektro-  
staleplavil'shchiku; spravochnye materialy. Moskva, Metal-  
lurgizdat, 1962. 199 p. (MIRA 16:7)  
(Steel--Electrometallurgy)

SPERANSKIY, Viktor Grigor'yevich; ZABALUYEV, Ivan Parfenovich

[Quality control of electric furnace steel] Kontrol' kachestva elektrostali. Moskva, Izd-vo Metallurgiya, 1964.  
199 p. (MIRA 17:5)